AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An image converting apparatus for converting document data constituted by containing plural sortshaving a plurality of types of draw drawing objects into image data constituted by a plurality of pixel data, the apparatus comprising:

first conversion means for converting said document data into first image data;

second conversion means for converting said first image data into second image data; and

a plurality of tables provided in correspondence withrespectively corresponding to at least one of plural sorts of drawthe plurality of types of drawing objects and containing information to which the image converting apparatus refers when said first image data acquired by converting the sort of draw object corresponding theretois converted into said second image data,; wherein:

_said second conversion means includes:comprises,

area creating means for subdividing the first image data into a plurality of areas;

area unit conversion means, as to each of areas obtained by subdividing said first image data by plural number, for converting first image data of within one or more of said the plurality of areas into corresponding second image data, while referring to one or more of said tablessaid table that respectively correspond correspoding to a sort of drawtype of drawing object contained in said one or more of the areas;

pixel unit conversion means, as to each of pixel data constituting said first image data, for converting individual said pixel data corresponding to one or more pixels within one or more of

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the plurality of areas into corresponding second image data, while referring to ~~said~~ one or more

of said tables that respectively correspond to a type of drawing object ~~table corresponding to a~~

~~sort of draw object~~ indicated by ~~said~~ the individual pixel data; and

conversion switching means for applying said pixel unit conversion means to ~~such an~~

~~area~~ areas wherein at least two of said plurality of tables ~~are corresponded to sorts of~~

~~draw~~ correspond to respective types of drawing objects contained therein, and for applying said

area unit conversion means to ~~such an area~~ areas wherein one of said ~~table~~ tables corresponds to ~~is~~

~~corresponded to~~ a ~~sort of a draw~~ type of drawing object contained therein or to ~~such an area~~ areas

containing no ~~draw~~ drawing object~~, within said first image data~~.

2. (original): An image converting apparatus for converting document data into image

data constituted by a plurality of pixel data, said document data being constituted by containing a

draw object classified as draw data and also a draw object classified as image data, comprising:

first conversion means for converting said document data into first image data;

second conversion means for converting said first image data into second image data;

a first table containing information to be referred to when first image data obtained by

converting the draw data is converted into second image data; and

a second table containing information to be referred to when first image data obtained by

converting the image data into second image data; wherein:

said second conversion means includes:

area unit conversion means operated in such a manner that as to each of areas obtained by subdividing said first image data by plural number, when a draw object contained in said area is classified as the draw data, first image data of said area is converted into second image data with reference to said first table, whereas when said draw object is classified as image data, first image data contained in said area is converted into second image data with reference to said second table;

pixel unit conversion means operated in such a manner that as to each of pixel data for constituting said first image data, when a draw object indicated by said pixel data is classified as draw data, said pixel data is converted into second image data with reference to said first table, whereas when said draw object is classified as image data, said pixel data is converted into second image data with reference to said second table; and

conversion switching means for applying said pixel unit conversion means to such an area containing both the draw object classified as the draw data and the draw object classified as the image data, and for applying said area unit conversion means to such an area containing any one of said draw objects classified as the draw data and the image data within said first image data.

3. (original): An image converting apparatus as claimed in claim 2 wherein:

as to each of the areas obtained by subdividing said first image data by the plural number, in such a case that a draw object is not contained in said area, said area unit conversion means

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converts first image data of said area into second predetermined image data without reference to

said first table and said second table; and

as to each of the pixel data constituting said first image data, in such a case that said pixel

data does not indicate a draw object, said pixel unit conversion means converts said pixel data

into second predetermined image data without referring to said first table and said second table.

4. (currently amended): An image converting apparatus as claimed in claim 2, further

comprising:

first judging means operated, prior to the conversion of document data into first image

data by said first conversion means, in such a manner that when said document data is converted

into said first image data, as to each of first areas obtained by subdividing said first image data

by plural number, said first judging means judges a draw object contained in said ~~area~~first areas;

second judging means for judging as to whether or not both a draw object classified as

draw data and a draw object classified as image data are contained in each of plural second areas

which are arranged by containing at least one of said first areas based upon the judgment result

of said first judging means; and

third judging means operated in such a manner that while said document data is

converted into the first image data by said first converting means as to each of the pixel data

contained in said second area which is judged by said second judging means in such a way that

both the draw object classified as the draw data and the draw object classified as the image data

are contained therein, said third judging means judges the draw object indicated by ~~said~~ the pixel

data; wherein:

said conversion switching means applies said area unit conversion means to such a

second area which is not judged by said second judging means in such a way that both the draw

object classified as the draw data and the draw object classified as the image data are contained

therein, and further, applies said pixel unit conversion means to such a second area which is

judged by said second judging means in such a way that both said draw objects classified as the

draw data and the image data are contained;

said area unit conversion means determines said first table and said second table, which

should be referred to in the case that as to the second area application-instructed by said

conversion switching means, first image data contained in this second area is converted based

upon the judgment result of said first judging means; and

said pixel unit conversion means determines said first table and said second table, which

should be referred to in the case that as to each of the pixel data contained in the second area

application-instructed by said conversion switching means, said pixel data is converted based

upon the judgment result of said third judging means.

5. (currently amended): An image converting apparatus as claimed in claim 4, wherein:

said first ~~area~~ areas are cells~~is a cell~~;

said second area is constituted by a plural number of said cells located adjacent to each

other;

while using a cell unit management table which is constituted by a plurality of entries corresponding to the respective cells, said first judging means describes into each of entries of said cell unit management table, the judgment results of the draw objects contained in said cells corresponding to said entries; and

said second judging means judges as to whether or not both the draw object classified as the draw data and the draw object classified as the image data are contained in said second area by checking the judgment results of the draw objects described in the respective entries corresponding to said plurality of cells contained in said second area.

6. (currently amended): An image converting apparatus as claimed in claim 4, wherein:

while said third judging means uses the-a pixel unit management table constituted by a plurality of entries corresponding to the-respective pixel data contained in said second area which is judged by said second judging unit in such a way that both the draw object classified as the draw data and the draw object classified as the image data are contained, said third judging means describes the judgment results of the draw objects indicated by the pixel data corresponding to said entries into said respective entries of said pixel unit management table.

7. (original): An image converting apparatus as claimed in claim 2, wherein:

said first image data is RGB image data;

said second image data is CMYK image data; and

said first and second tables correspond to such tables on which color correction

information is described, when the RGB image data is converted into the CMYK image data,

said color correction information being referred to.

8. (currently amended): An image converting apparatus as claimed in claim 2, further

comprising:

area unit judging means operated, prior to the conversion of document data into first

image data by said first conversion means, in such a manner that when said document data is

converted into said first image data, as to each of a plurality of cells obtained by subdividing said

first image data by a plural number, said area unit judging means judges a draw object contained

in one of said cellcells, and also describes the judgement judgment result in an entry

corresponding to said the one cell, provided in a cell unit management table which is constituted

by a plurality of entries corresponding to said respective cells; and

pixel unit judging means operated in such a manner that while said document data is

converted into the first image data by said first converting means, as to each of the pixel data

contained in the cells corresponding to such entries contained in said cell unit management table

to which such a fact is described that both a draw object classified as draw data and a draw

object classified as image data are contained, said pixel unit judging means judges a draw object

indicated by said pixel data, and also describes the judgement judgment result in an entry

corresponding to said pixel data, provided in a pixel unit management table which is constituted

by a plurality of entries corresponding to said respective pixel data; wherein:

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said conversion switching means applies said pixel unit conversion means to a cell

corresponding to the entry contained in said cell unit management table- to which such a fact is

described that both the draw object classified as the draw data and the draw object classified as

the image data are contained, and also applies said area unit conversion means to cells other than

said cell;

said area unit conversion means determines said first table and said second table which

should be referred to in such a case that as to the a cell application-instructed by said conversion

switching means, such a fact is described that any one of said draw object classified as the draw

data and said draw object classified as the image data is contained in the entry corresponding to

said cell of said cell unit management table, depending upon the sort of said draw object; said

area unit conversion means converts first image data contained in said cell into second image

data by employing the determined table; whereas in the case that such a fact that the draw object

is contained is not described in the entry corresponding to said cell, provided in said cell unit

management table, said area unit conversion means converts the first image data contained in

said cell into predetermined second image data without referring to said first table and said

second table; and

said pixel unit conversion means determines said first table and said second table, which

should be referred to in such a case that as to each of pixel data contained in the cell application-

instructed by said conversion switching means, such a fact is described that any one of said draw

object classified as the draw data and said draw object classified as the image data is contained in

the an entry corresponding to said cell of said cell unit management table, depending upon the

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sort of said draw object; said pixel unit conversion means converts said pixel data into second

image data by employing the determined table; whereas in the case that such a fact that the draw

object is contained is not described in ~~the~~ an entry corresponding to said pixel data, provided in

said pixel unit management table, said pixel unit conversion means converts the pixel data into

predetermined second image data without referring to said first table and said second table.

9. (original): A print control apparatus for controlling a printer, comprising:

the image converting apparatus recited in claim 2 wherein:

said print control apparatus controls printing operation of said printer in response to said

image data produced by said image converting apparatus.

10. (original): A storage medium for storing thereinto a program used to convert

document data constituted by containing plural sorts of draw objects into image data constituted

by a plurality of pixel data, wherein:

while said program is read to be executed by a computer, both first converting means for

converting said document data into first image data, and second converting means for converting

said first image data into second image data are constituted on said computer; and

said second converting means includes:

area unit converting means, as to each of areas obtained by subdividing said first image

data by plural number, for converting first image data of said area into second image data with

reference to a table containing information which should be referred to in the case that the first

image data is converted into the second image data, and said first image data is previously

prepared in correspondence with a sort of draw object contained in said area and also is obtained

by converting said sort of draw object;

pixel unit converting means, as to each of pixel data constituting said first image data, for

converting said pixel data into second image data with reference to a table containing

information which should be referred to in the case that the first image data is converted into the

second image data, and said first image data is previously prepared in correspondence with a sort

of draw object indicated by said pixel data and also is obtained by converting said sort of draw

object; and

conversion switching means for applying said pixel unit conversion means to such an

area wherein at least two said tables are corresponded to sorts of draw objects contained therein,

and for applying said area unit conversion means to such an area wherein one said table is

corresponded to a sort of a draw object contained therein or to such an area containing no draw

object, within said first image data.

11. (original): A program product for converting document data constituted by

containing plural sorts of draw objects into image data constituted by a plurality of pixel data,

wherein:

while said program is read to be executed by a computer, both first converting means for

converting said document data into first image data, and second converting means for converting

said first image data into second image data are constituted on said computer; and

said second converting means includes:

area unit converting means, as to each of areas obtained by subdividing said first image data by plural number, for converting first image data of said area into second image data with reference to a table containing information which should be referred to in the case that the first image data is converted into the second image data, and said first image data is previously prepared in correspondence with a sort of draw object contained in said area and also is obtained by converting said sort of draw object;

pixel unit converting means, as to each of pixel data constituting said first image data, for converting said pixel data into second image data with reference to a table containing information which should be referred to in the case that the first image data is converted into the second image data, and said first image data is previously prepared in correspondence with a sort of draw object indicated by said pixel data and also is obtained by converting said sort of draw object; and

conversion switching means for applying said pixel unit conversion means to such an area wherein at least two said tables are corresponded to sorts of draw objects contained therein, and for applying said area unit conversion means to such an area wherein one said table is corresponded to a sort of a draw object contained therein or to such an area containing no draw object, within said first image data.

12. (original): An image converting method for converting document data constituted by containing plural sorts of draw objects into image data constituted by a plurality of pixel data, comprising:

a first converting step for converting said document data into first image data; and

a second converting step for converting said first image data into second image data; wherein:

said second converting step includes:

an area unit converting step, as to each of areas obtained by subdividing said first image data by plural number, for converting first image data of said area into second image data with reference to a table containing information which should be referred to in the case that the first image data is converted into the second image data, and said first image data is previously prepared in correspondence with a sort of draw object contained in said area and also is obtained by converting said sort of draw object; and

a pixel unit converting step, as to each of pixel data constituting said first image data, for converting said pixel data into second image data with reference to a table containing information which should be referred to in the case that the first image data is converted into the second image data, and said first image data is previously prepared in correspondence with a sort of draw object indicated by said pixel data and also is obtained by converting said sort of draw object; and wherein

said pixel unit converting step is applied to such an area wherein at least two said tables are corresponded to sorts of draw objects contained therein, and said area unit converting means

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is applied to such an area wherein one said table is corresponded to a sort of a draw object

contained therein or to such an area containing no draw object, within said first image data.

13. (new): An image converting apparatus for converting document data into image data

constituted by a plurality of pixel data, said document data comprising a draw object classified as

draw data and also a draw object classified as image data, the apparatus comprising:

first conversion means for converting said document data into first image data;

second conversion means for converting said first image data into second image data;

a first table containing information to be referred to when first image data obtained by

converting the draw data is converted into second image data; and

a second table containing information to be referred to when first image data obtained by

converting the image data is converted into second image data,

wherein said second conversion means comprises;

area unit conversion means operated in such a manner that as to each of areas obtained by

subdividing said first image data by plural number, when a draw object contained in said area is

classified as the draw data, first image data of said area is converted into second image data with

reference to said first table, whereas when said draw object is classified as image data, first

image data contained in said area is converted into second image data with reference to said

second table;

pixel unit conversion means operated in such a manner that as to each of pixel data for

constituting said first image data, when a draw object indicated by said pixel data is classified as

draw data, said pixel data is converted into second image data with reference to said first table, whereas when said draw object is classified as image data, said pixel data is converted into second image data with reference to said second table;

conversion switching means for applying said pixel unit conversion means to such an area containing both the draw object classified as the draw data and the draw object classified as the image data, and for applying said area unit conversion means to such an area containing any one of said draw objects classified as the draw data and the image data within said first image data;

area unit judging means operated, prior to the conversion of document data into first image data by said first conversion means, in such a manner that when said document data is converted into said first image data, as to each of a plurality of cells obtained by subdividing said first image data by a plural number, said area unit judging means judges a draw object contained in one of said cells, and also describes the judgment result in an entry corresponding to the one cell, provided in a cell unit management table which is constituted by a plurality of entries corresponding to respective cells; and

pixel unit judging means operated in such a manner that while said document data is converted into the first image data by said first converting means, as to each of the pixel data contained in the cells corresponding to such entries contained in said cell unit management table to which such a fact is described that both a draw object classified as draw data and a draw object classified as image data are contained, said pixel unit judging means judges a draw object indicated by said pixel data, and also describes the judgment result in an entry corresponding to

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said pixel data, provided in a pixel unit management table which is constituted by a plurality of

entries corresponding to said respective pixel data.